

# EXHIBIT O

UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.

Before the Hon. Theodore R. Essex  
Administrative Law Judge

In the Matter of

CERTAIN COMPUTERS AND COMPUTER  
PERIPHERAL DEVICES AND  
COMPONENTS THEREOF AND  
PRODUCTS CONTAINING THE SAME

Investigation No. 337-TA-841

**DECLARATION OF DALE E. BUSCAINO IN SUPPORT OF  
TPL'S RESPONSE TO RESPONDENTS' OPENING CLAIM CONSTRUCTION BRIEF**

I, Dale Buscaino, declare as follows:

1. I have over twenty five years of experience as an engineer, executive and consultant in the personal computer industry. A copy of my curriculum vitae is attached to this report as Exhibit 1.

2. In 1982, I obtained a Bachelor of Science degree in Computer Science from the University of California at Irvine in 1982.

3. From 1980 to 1984, I was Partner at Progressive Software Design, which provided consulting services for companies developing TRS-80 and IBM PC-based computer products. I was the co-developer of the Electric Pencil word processing program for the IBM PC. Electric Pencil was one of the first commercially available word processor programs available on the IBM PC and was sold in the retail market until 1986.

4. From 1984 to 1992, I was the Co-Founder and Vice President of Engineering for Quadtel Corporation. I designed and developed the company's initial BIOS products. BIOS

(Basic Input/Output System) is firmware installed on a personal computer which interfaces with each peripheral connected to a computer (e.g., keyboard, monitor, external drives). While at Quadtel, I was also involved in several driver projects involving SCSI drives, along with multiple firmware projects relating to single chip microcontrollers.

5. In 1992, I became the Vice President of Research and Development for Phoenix Technologies, the leading BIOS supplier for IBM compatible personal computers. In the 1992 time frame, the addition of peripherals and devices to a personal computer was difficult and time-consuming. Several companies, including Phoenix, Intel, Microsoft, and Compaq Computer Corporation, began an initiative to simplify the addition of peripherals to a personal computer. I was integrally involved in that initiative and ultimately architected the specification for “Plug and Play” BIOS, which is now the de facto standard for the personal computer industry.

6. From 1992 through 1994, I was responsible for initiating and developing the Phoenix PCMCIA Software products. PCMCIA cards are roughly the size of a credit card and can be used to expand the capabilities of a computer system. PCMCIA cards were typically used as IDE/ATA or Flash storage devices, or as a peripheral such as a modem or network adapter. The PCMCIA card is inserted into a PCMCIA connector typically found in notebook computers.

7. As part of my responsibilities at Phoenix Technologies, I became involved with the AT Attachment Packet Interface (ATAPI) committee, which was an American National Standards Institute (ANSI) committee formed to develop a new IDE/ATA standard, which supported a PC design that included an internal CD-ROM drive that would communicate with a host computer through an IDE interface. My participation was on behalf of the BIOS

community to make sure that the compatibility concerns of system manufacturers were addressed in the new specification.

8. From 1994 through 1998, I was the Co-Founder and Vice President of Engineering at Futuretouch Corporation (“Futuretouch”). Futuretouch was primarily engaged in software development and marketing in the internet computing industry, as well as providing consulting services to companies in the PC industry.

9. From 1998 to the present, I have provided independent consulting services to the computing industry as well as expert witness services to the legal community.

10. Through the years, I have participated in various speaking engagements, technology roundtables or symposia and industry standards working groups. For example, I participated in an executive roundtable entitled “The Impact of PCMCIA by 1996,” whose proceedings are recorded in the Sept/Oct ’94 issue of *IC Card Systems & Design*.

11. In forming my opinions, I rely on my knowledge and experience noted above. I also rely on the documents and information referenced and cited in this report including any exhibits thereto.

12. I have been asked by Technology Properties Limited, LLC (“TPL”) to review Respondents’ Opening Claim Construction Brief in this matter and render my opinions regarding Respondents’ arguments. In forming the opinions contained in this Declaration, I have reviewed U.S. Patent Nos. 7,522,424 (“the ‘424 patent”), U.S. Patent Nos. 7,719,847 (“the ‘847 Patent”), 6,438,638 (“the ‘638 patent”), the file histories for these patents, and Respondents’ Opening Claim Construction Brief and attached exhibits. I have also reviewed TPL’s Opening Claim Construction Brief and attached exhibits.

13. In addition to reviewing the above materials, I have also been asked by (“TPL”) to review U.S. Patent No. 7,162,549 (“the ‘549 patent”), its file history, and the pending re-issue application for the ‘549 patent, and its file history.

14. It is my opinion that one of ordinary skill in the art relevant to the ‘424, ‘847, ‘549 and ‘638 patents is a person with a bachelor’s of science in electrical or computer engineering with approximately three years of experience working with computer peripherals and/or external storage devices, or equivalent degrees or experience. Such person would possess the skills and experience required to read, understand and practice the ‘424, ‘847, ‘549, and ‘638 patents. I am at least one of ordinary skill in the art.

15. I have been informed by TPL’s counsel that a party seeking to invalidate a claim under 35 U.S.C. § 112, ¶ 2 as indefinite must show by clear and convincing evidence that one skilled in the art would not understand the scope of the claim when read in light of the specification.

16. I understand that Respondents have asserted that the following phrases in claim 25 of the ‘424 patent, claim 28 of the ‘424 patent, and claim 1 of the ‘847 patent are invalid under 35 U.S.C. § 112, ¶ 2 because they are indefinite:

- a. “means for mapping power, ground or data signals between said interconnection pins and said one or more contact pins depending upon the identification of the type of memory card inserted into said port;”
- b. “means for mapping, power, ground or data signals between said interconnection means and said one or more contact pins depending upon the identification of the type of memory card inserted into said port;” and

c. “means for mapping power, ground or data signals between said signal lines and said contact pins depending upon the identification of the type of memory card inserted into said port.”

17. Having reviewed Respondents’ Opening Claim Construction Brief, I disagree with Respondents’ contention that claims 25 and 28 of the ‘424 patent and claim 1 of the ‘847 patent are indefinite. I, as one of ordinary skill in the art at the time the ‘424, ‘847, and ‘638 patents were filed, would have understood the scope of claims 25 and 28 of the ‘424 patent and claim 1 of the ‘847 patent.

18. I understand Respondents to essentially be making the argument that there is not sufficient structure disclosed in the specifications of the ‘424 and ‘847 patents associated with the function of “mapping power, ground or data signals . . .” in claim 25 of the ‘424 patent, claim 28 of the ‘424 patent, and claim 1 of the ‘847 patent. I understand Respondents to be arguing that there is not sufficient structure disclosed because there is no disclosure of an algorithm for performing the function of “mapping power, ground or data signals . . .” in claim 25 of the ‘424 patent, claim 28 of the ‘424 patent, and claim 1 of the ‘847 patent. I disagree with this argument.

19. Based on my review of the intrinsic evidence, including the ‘424 patent, ‘847 patent, and ‘638 patent,<sup>1</sup> and the file histories for these patents, it is clear to me that the specifications of the ‘424 and ‘847 patents disclose corresponding structure associated with the function of “mapping power, ground or data signals . . .”

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<sup>1</sup> I understand that the ‘638 patent is a related parent of ‘424 and ‘847 patents and is incorporated by reference into the ‘424 and ‘847 patents.

20. It is my opinion that the disclosed structure includes a controller or controller chip. As one of ordinary skill in the art, I do not believe that the controller or controller chip requires programming. In my opinion, the controller or controller chip is a chip or integrated circuit that can manage, for example, flash memory card input / output, without the need for a computer or microprocessor and without any programmed algorithm. It is my opinion that a computer-less, microprocessor-less integrated circuit or chip can perform the function of “mapping power, ground or data signals . . . .” And, I do not view the specifications of the ‘847 and ‘424 patents as limiting the controller or controller chip to require a computer or microprocessor.

21. However, even if implementation of the controller or controller chip was limited to a computer or microprocessor, or was viewed to require an algorithm or programming, it is clear to me as one of ordinary skill in the art that the specifications of the ‘424 and ‘847 patents disclose an algorithm for “mapping power, ground or data signals . . . .” And, it is my opinion that one of ordinary skill in the art would find this algorithm to be sufficient for performing the function of “mapping power, ground or data signals . . . .”

22. Sufficient algorithm is at least disclosed in Figures 4 and 5 of the ‘424 and ‘847 patents and in column 5, line 54 through column 6, line 63 of the ‘424 patent and in column 5, line 41 through column 67, line 49 of the ‘847 patent.

23. For example, Figures 4 and 5 of the ‘424 patent each disclose detailed pin mapping tables. These tables disclose an algorithm for logically mapping or assigning, power, ground, or data signals to specific signal lines based upon an identification of the type of memory media card inserted into the port.

24. As one example, if the identification is a Smart Media card type, Figure 4 teaches how to map or assign the data, power, and ground signals. Specifically, if the identification is Smart Media, Figure 4 teaches the algorithm of mapping or assigning signals D1 through D7 to pins 2 through 8, a ground signal to pin 18, and a power signal to pin 19.

25. As another example, if the identification is an xD card type, Figure 5 teaches how to map or assign the data, power and ground signals. Specifically, if the identification is xD, Figure 5 teaches the algorithm of mapping or assigning signals D0 through D7 to pins 10 through 17, a ground signal to pin 1, and a power signal to pin 18.

26. As another example, if the identification is an MMC card type, Figure 5 of the ‘638 patent, incorporated by reference into the ‘424 and ‘847 specifications, discloses how to map or assign the data, power and ground signals. For example, if the identification is MMC, Figure 5 teaches the algorithm of mapping or assigning 1-bit serial data signal DIO to pin 19. This is MMC mode. Although the SD card was known at the time of the filing of the ‘638 application as being able to communicate using 1-bit serial mode, the SD card also had a 4-bit parallel mode, which the MMC card did not have. The SD card’s 4-bit parallel mode is disclosed in Figures 4 and 5 and in the specifications of the ‘424 and ‘847 patents and would also have been known by one of ordinary skill in the art at the time the ‘638 application was filed. See ‘424 patent at 6:12-22; ‘847 patent at 5:67-6:9. Thus, as taught by the specifications and as one of ordinary skill in the art would understand, if the identified card type is MMC, only one data signal is assigned a pin, whereas if the SD is identified four data signals are assigned to four pins.

27. As another example, the specifications of the ‘424 and ‘847 patents give examples of how various power, ground, and/or data signals are mapped to different pins

depending upon the identification of the card inserted into the port. *See* ‘424 patent at 5:54-6:57; ‘847 patent at 5:41-6:49.

28. As a further example, the ‘424 and ‘847 patents also incorporate by reference the ‘638 patent which also discloses using the pin mapping table of its Figure 5 to map power, ground, or data signals depending upon the identification of the type of memory card inserted into the port. *See* ‘638 patent at 7:35-8:20; Fig. 5.

29. As one of ordinary skill in the art, I understand Figures 4 and 5 and each of the sections of the ‘424, ‘847, and ‘638 patents, alone or in combination, to be sufficient disclosure of an algorithm for “mapping power, ground or data signals between said [interconnection pins / interconnection means / signal lines] and the [contact pins / one or more contact pins] depending upon the identifications of the type of memory card inserted into the port.” This is because, as explained above, the assignment tables in Figures 4 and 5 and discussion in the specification disclose in understandable terms exactly how to map power, ground, and signals based upon the identification of the type of memory card.

30. As one of ordinary skill in the art, I understand that the contact pins are connected to the controller via [signal lines / interconnection means / interconnection pins]. Thus, as one of ordinary skill in the art, I understand that mapping signals between [interconnection pins / interconnection means / signal lines] and contact pins necessarily involves assigning signals to [interconnection pins / interconnections means / signal lines] and contact pins.

31. As such, it is my opinion that the ‘424 and ‘847 patents disclose a corresponding structure and algorithm for the “mapping power, ground or data signals . . .” functions in the above-referenced claims. And, as one of ordinary skill in the art, I find the

structure corresponding to, and algorithm for, disclosed in these specifications for the “mapping power, ground or data signals . . .” functions to be more than sufficient.

32. I also understand that Respondents have asserted that the term “the flash adapter section” in claims 7 and 11 of the ‘549 patent is indefinite.

33. Having reviewed Respondents’ Opening Claim Construction Brief, I disagree with Respondents’ contention that claims 7 and 11 of the ‘549 patent are indefinite. I, as one of ordinary skill in the art at the time the ‘549 patent was filed, would have understood the scope of claims 7 and 11 of the ‘549 patent.

34. I understand Respondents to essentially be making the argument that one of ordinary skill in the art would not understand what the term “the flash adapter” in claims 7 and 11 of the ‘549 patent refers to. I disagree with this argument.

35. Based on my review of the intrinsic evidence, including the ‘549 patent and its file history, it is clear to me as one of ordinary skill in the art that the term “the flash adapter section” implicitly refers to the “flash adapter.” Because the controller chips of claims 7 and 11 comprise a flash adapter, the controllers necessarily comprise a section that is a flash adapter—a flash adapter section. Further, nothing in the language of claims 7 and 11, or otherwise, leads me to believe that the “flash adapter section” refers to anything other than the “flash adapter.” One of ordinary skill in the art, having reviewed the intrinsic evidence, would understand the meets and bounds of these claims and that the applicant was referring to the “flash adapter” by his use of the term “the flash adapter section.”

36. Further, it is my understanding that the claims can be construed, as proposed by TPL, to eliminate any question as to what the term “the flash adapter section” refers.

37. Based on my review of the intrinsic evidence, including the ‘549 patent, I agree with TPL that “flash adapter” should be construed to mean “flash adapter section.”

38. I also understand that Respondents have asserted that claims 25 and 26 of the ‘424 patent and claim 1 of the ‘847 patent would be indefinite for lack of written description and enablement if TPL’s proposed structure were adopted for the phrase “type of [the/a] memory [media] card inserted into said port.” I understand that Respondents’ basis for this assertion is that there is no structure disclosed anywhere in the specifications that is used to separately identify and differentiate between an MMC card and an SD card.

39. Having reviewed Respondents’ Opening Claim Construction Brief, I disagree with Respondents’ basis for the assertion.

40. There are a number of structures disclosed in the ‘424 and ‘847 patent specifications that are involved in the card identification process. Both patent specifications expressly disclose a signal line to the controller that serves as a card detect line, a card detect pin, and control signals. ‘424 patent at 6:42-53; ‘847 patent at 6:31-41; 5:52-54. The two patents also discloses pull-up resistors in its discussion of signal lines and pins being pulled high and low, and those pull-up resistors are also disclosed in the ‘638 patent which is incorporated by reference. ‘424 patent at 6:41-44; ‘847 patent at 6:29-32; ‘638 patent at 6:27-28. Further, Figures 4 and 5 of the ‘424 and ‘847 patents disclose MCMD, which refers to a pin and corresponding control signal line used by the controller for sending commands and by SD and MMC cards for issuing responses back to the controller. In addition, the ‘424 and ‘847 patents disclose “control signals” in column 6, lines 51-53 and column 5, lines 52-54, respectively. Control signals include signals issued by the controller to a card that include initialization commands. Initialization commands disclosed in the SD specification, such as

CMD0, ACMD41, CMD2, and CMD3, are conveyed along the MCMD control signal line and are used by the controller to distinguish between SD and MMC cards. Responses from SD and MMC cards are also conveyed along the MCMD controls signal line.

41. One skilled in the art reading the ‘424 and ‘847 patents would understand that this invention relates to the use of flash memory cards and these flash memory cards have standards published as card specifications.

42. One skilled in the art would also understand from what the ‘424 and ‘847 patents disclose that the specific control signals used to distinguish SD from MMC were available in the SD specifications.

43. The details of what initialization commands need to be issued by the controller to distinguish SD from MMC can be found in SD Specification: Part I Physical Layer Specification, which one skilled in the art would certainly know and understand. The SD Specifications versions 1.0, 2.00, and 3.00 all contain the specification initialization commands used to distinguish SD from MMC, respectively.

44. The standards body responsible for Secure Digital is also inherently disclosed in the ‘424 and ‘847 patents, which discuss the Secure Digital card type, and is expressly disclosed by the ‘638 patent which is incorporated by reference: “SD is controlled by the SD Group that includes Matsushita Electric Industrial Co., SanDisk Corporation, Toshiba Corp.”

I declare that the foregoing is true and correct to the best of my knowledge and belief and  
that it is a true and accurate copy of my Declaration.

DATE: August 2, 2012

A handwritten signature in blue ink, appearing to read "Dale R. Paulson". It is written in a cursive style with some bold strokes.

# **EXHIBIT 1**

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# Dale Buscaino

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## PROFESSIONAL EXPERIENCE

1998 to present

### **Independent Consulting Services**

Provides consulting services to the computing industry including expert witness services for the legal community.

1994 to 1998

### **FUTURETOUCH CORPORATION**

#### **Co-Founder and Vice President, Engineering**

This internet-focused company has developed a WYSIWYG JAVA design tool for creating web sites on-line. Responsibilities included development of Windows NT server software, designed to handle requests from the JAVA designer client. Previous responsibilities included software development, technical sales and marketing for a line of multimedia personal computer products.

1992 to 1994

### **PHOENIX TECHNOLOGIES**

#### **Vice President, Research and Development**

Responsible for product development strategies for the company's Personal Computer Division. Conceived separate product strategies for Plug and Play BIOS and PCMCIA software. In addition, initiated and developed the Phoenix PCMCIA software product line. Also served as key technical liaison with major computer manufacturers, including Toshiba, Fujitsu, DEC, IBM, and Hewlett Packard.

1984 to 1992

### **QUADTEL CORPORATION**

#### **Co-Founder and Vice President, Engineering**

Designed and developed the company's initial firmware products, including XT BIOS, AT BIOS, EGA/VGA BIOS, power management and keyboard firmware. Responsibilities included maintaining technical relationships with core-logic vendors such as Intel, VLSI, Headland Technologies, and Chips and Technologies. Also served as technical interface with key customers, including Canon, Fujitsu, Sanyo, and Seiko Epson.

1980 to 1984

**PROGRESSIVE SOFTWARE DESIGN**  
**Partner**

Progressive Software Design provided consulting services for companies developing TRS-80 based computer products. Also collaborated in development of the company's Electric Pencil word processing program, a product for the IBM PC, which was sold in the retail market until 1986.

**EDUCATION**

BS, computer science, University of California, Irvine, 1982

**PUBLICATIONS**

Co-author of the industry standard Plug and Play BIOS specification developed by Phoenix Technologies, Intel Corporation and Compaq Corporation, 1993.

**LITIGATION CASE HISTORY**

Compaq v. Packard Bell, 1996. Retained by Wilson, Sonsini, Goodrich, & Rosoti.

Oak Technologies v. UMC, et al. (ITC), 1998. Retained by Wilson, Sonsini, Goodrich & Rosoti.

Ethan Shaw et al. v. Toshiba (TAIS), 1999, Retained by Fulbright & Jaworski.

Anthony Coppola v. American Power Conversion (APC), 2000, Retained by Mintz, Levin, Cohen, Ferris, Glovsky, and Popeo PC.

Compaq v. eMachines, 2000–2002, Retained by Fulbright & Jaworski and Fish & Richardson, P.C., P.A.

Zoran Corporation v. MediaTek, Inc., et al., 2004-2005, Retained by Wilson, Sonsini, Goodrich & Rosati.

Hewlett Packard v. Gateway, Inc. 2004 -2005, Retained by Dewey Ballantine, LLP.

Oak Technologies v. UMC, Inc. 2002 – 2006, Retained by Wilson, Sonsini, Goodrich & Rosati.

Samsung Electronics Co., Ltd v. Compal. 2001-2006 , Retained by Orrick, Herrington & Sutcliffe LLP.

Lucent Technologies, Inc. v. Gateway, Inc., Dell Inc., and Microsoft Corp. 2006 - 2008 .  
Retained by Dechert LLP, Arnold & Porter LLP, and Fish and Richardson P.C.

Microsoft Corp. v. Lucent Technologies Inc., Alcatel-Lucent, and Multimedia Patent Trust.  
2007 - 2008, Retained by Fish and Richardson P.C.